HITACHI CT-S2840

MODEL

SERVICE MANUAL

SALORA 'K' Series Chassis, Models 20K30, 20K37, 21K70, 21K7 22K30, 22K37, 24K70, 24K7 26K30, 26K37, 26K70, 28K70, 28K7

General Description: A colour television receiver chassis with optional Teletext, P.A.L./S.E.C.A.M. transcoder, F.M. radio, videotext, satellite tuner and direct signal connection via a SCART socket. The circuit is capable of driving 90° or 110° cathode ray tubes and is powered from a switch-mode power supply which is 'live' on the primary side of the switched transformer irrespective of mains connections. This section is located on the lower part of the 'mother' board.

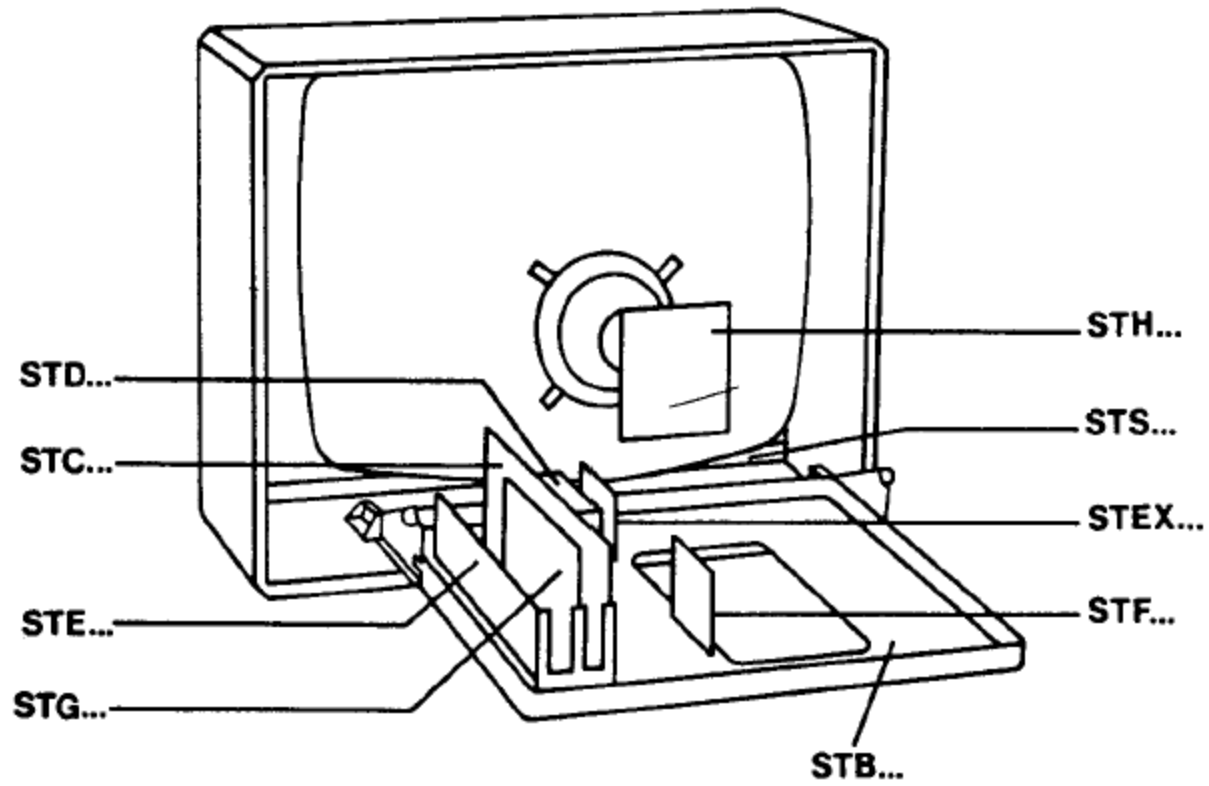
Mains Supply: 240 volts, 50Hz.

Module codes (See Fig. T112):

STB — Mother board
STC — Voltage synthesizer module
STD — Video and sound IF module
STE — Sound module
STH — Picture tube base panel
SCS — Control unit
STUL — Remote control transmitter

In addition, components on the mother board STB — are grouped according to their function as follows:

100 — Mother board interface comp's
200 — Colour section
500 — Deflection section
600 — Power section, mains isolated
700 — Power section, mains non-isolated



(T112) LOCATION OF PANELS — 'K' SERIES CHASSIS

Voltage Checks

Operating Point (24kV E.H.T.): Operating point is set by the factory to the following values (test point B4 on hybrid HB600 pins 5 and 6); in receivers with 110° deflection to 140V ± 3V; in receivers with 90° deflection to 120V ± 3V.

12·5V Supply: Connect the voltmeter to test point B5 (ICB601 pin 3).
Check that the voltage is 12·5V ± 0·6V.

Adjustments

Line Oscillator Frequency (Hor. Freq.): Connect pin 5 of line oscillator circuit ICB500 to ground potential (connector B14).
Set picture upright with RTB541 (Hor. Freq.).
Remove the short.

Horizontal Linearity (Hor. Lin.): Adjust the picture to its widest position with coil LB503 (Hor. Lin.) then turn the same coil anti-clockwise to set horizontal linearity to optimum. Make sure that both the right and left side squares are similar in width and that there is no dark shadow on the left hand side of the picture.

Horizontal Centering (line oscillator phase): Centre the picture horizontally with trimmer RTB542.

Alignment of Diode Modulator

This adjustment does not exist in 90° sets: Adjust picture width to minimum using trimmer RTB501.
Adjust picture as narrow as possible using coil LB502.
Re-adjust trimmer RTB501 to set the correct picture width.

Picture Width: Set Brightness, Contrast and Colour saturation for normal picture. Adjust picture width using trimmer RTB501 (in receivers with 90° deflection using coil LB502).

Vertical Centering: Set Brightness and Contrast for normal picture.
Adjust vertical centering with trimmer RTB571.

Picture Height (Vert. Ampl.): Set Brightness and Contrast so that the picture height is reduced to its minimum.
Adjust picture height with trimmer RTB543 (Vert. Ampl.).

East-West Raster Correction (E-W Ampl.): This adjustment is not possible in 90° sets.
Check picture width adjustment. Straighten the vertical lines with trimmer RTB502 (E-W Ampl.).

Focus: Set Contrast close to maximum and Brightness for a well balanced greyscale.

Adjust focus to optimum using Focus potentiometer of the trimming unit RTH1 on the picture tube base panel.

Screen Grid Voltage (G2): Connect a test picture to the receiver set Brightness, Contrast and Colour saturation to minimum.

Check, using a voltmeter, which of the output voltages of test points TP1 (R), TP2 (G) and TP3 (B) is the highest.

Connect the voltmeter to the output of the highest voltage and adjust trimmer G2 on the trimmer unit RTH1 for a black level of 160V.

Highlight Greyscale Tracking: Connect the oscilloscope to testpoint TP2 (G).

Adjust Contrast control for a voltage of 60V from black level to peak on the green cathode.

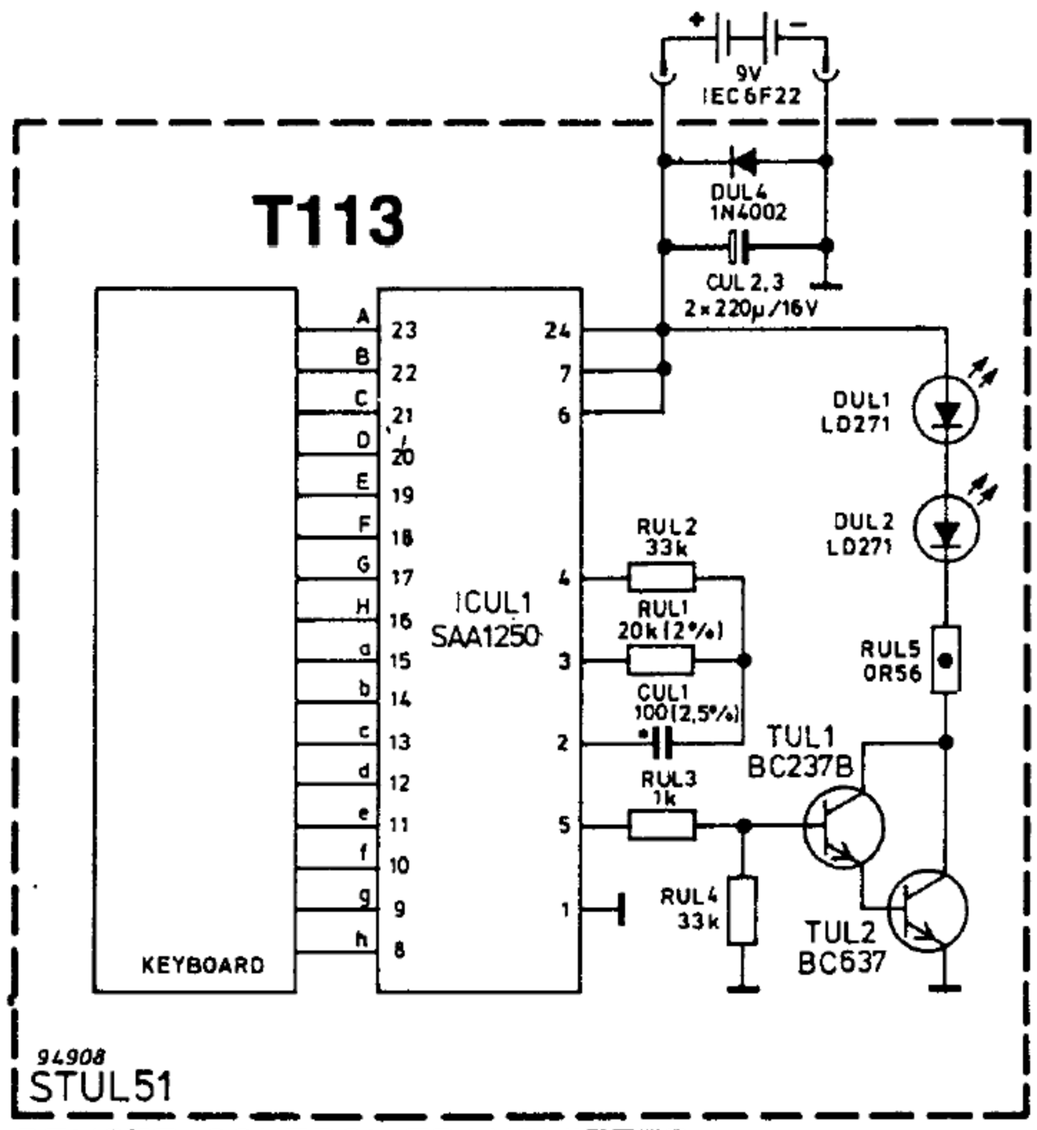
Disconnect the oscilloscope from TP2.

Adjust Brightness for normal picture. Adjust, using trimmers RTH10 (R-Ampl.) and RTH30 (B-Ampl.), the white parts of the test picture to obtain white.

The lowlight greyscale will be adjusted automatically by the receiver.

Adjustment of Tuner A.G.C. (Tuner A.G.C.)

Using a Colour Test Transmission: Adjust RTD1 according to receiving conditions so that no picture noise is visible and no overloading takes place.

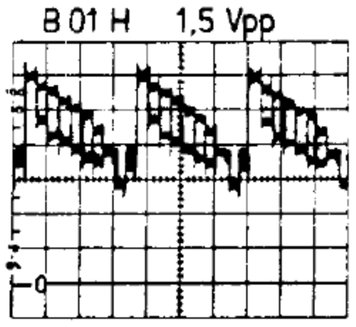


REMOTE CONTROL TRANSMITTER
TRANSMETTITORE TELECOMANDO

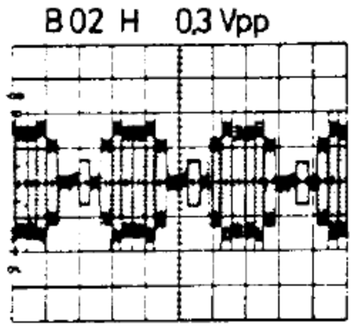
(T113) CIRCUIT DIAGRAM (REMOTE CONTROL UNIT)
— 'K' SERIES CHASSIS

SALORA

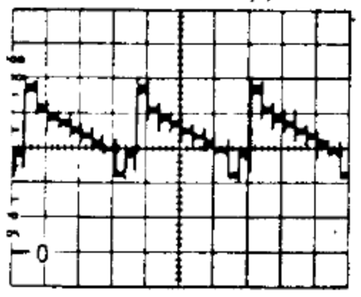
B 01 H 1,5 Vpp



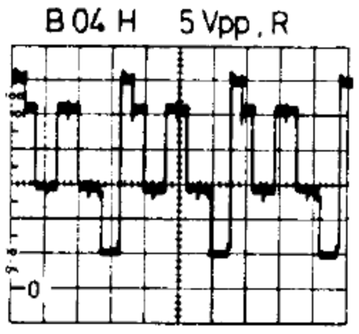
B 02 H 0,3 Vpp



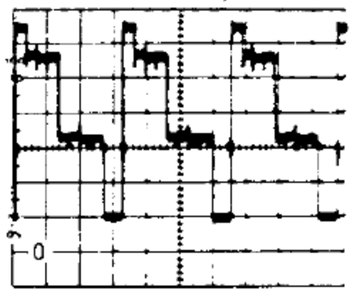
B 03 H 0,5 Vpp



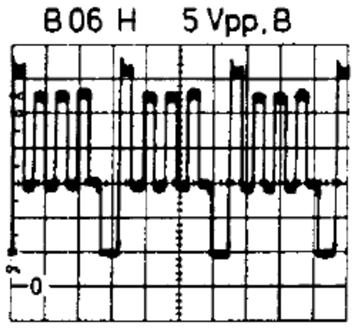
B 04 H 5 Vpp, R



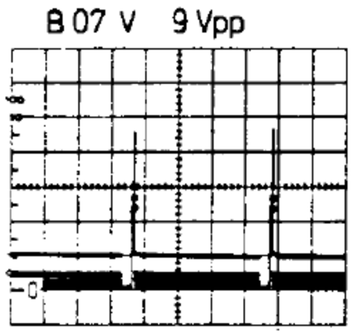
B 05 H 5 Vpp, G



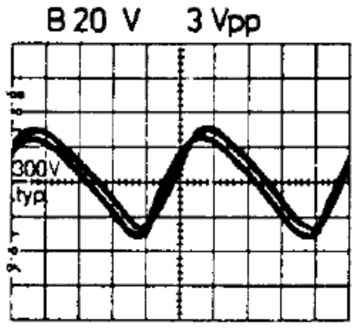
B 06 H 5 Vpp, B



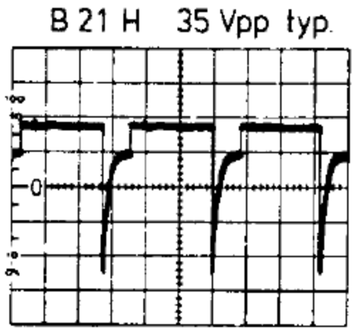
B 07 V 9 Vpp



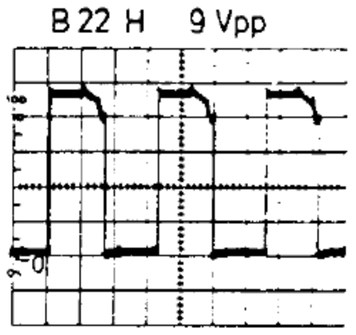
B 20 V 3 Vpp



B 21 H 35 Vpp typ.

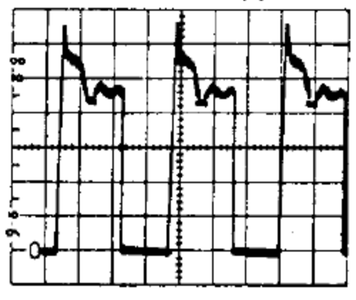


B 22 H 9 Vpp

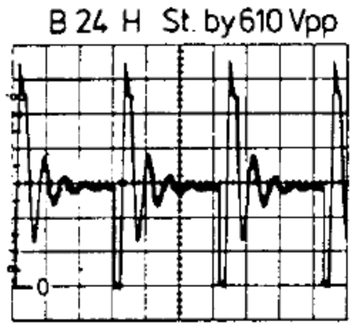


T67

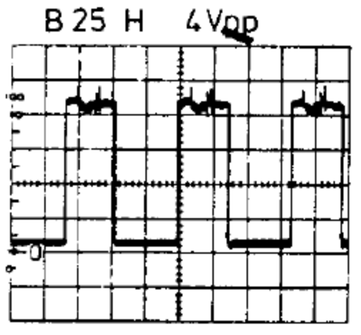
B 23 H 610 Vpp



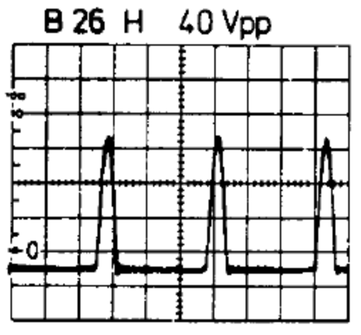
B 24 H St. by 610 Vpp



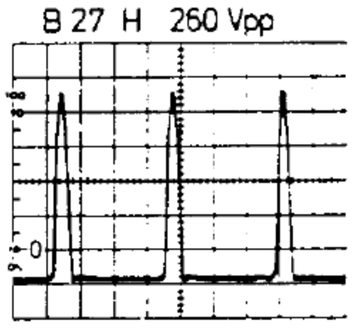
B 25 H 4 Vpp



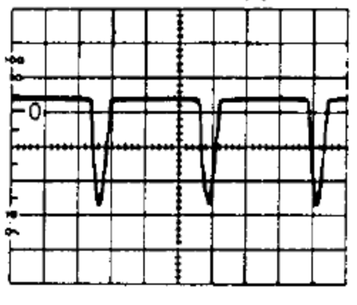
B 26 H 40 Vpp



B 27 H 260 Vpp

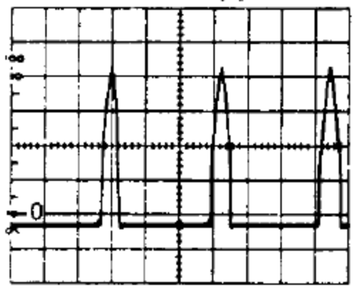


B 28 H 150 Vpp

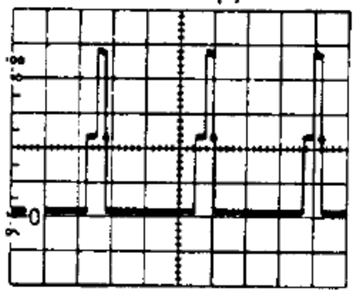


B 29 H 60 Vpp

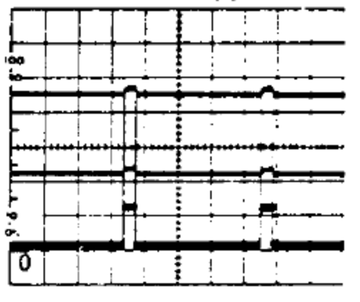
B 30 H 9 Vpp



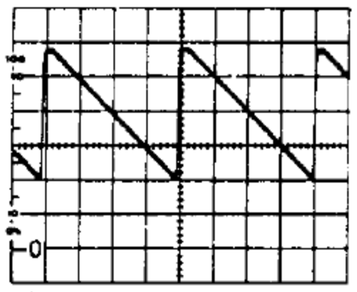
B 31 H 9 Vpp



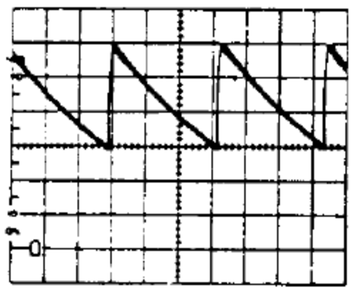
B 31 V 9 Vpp



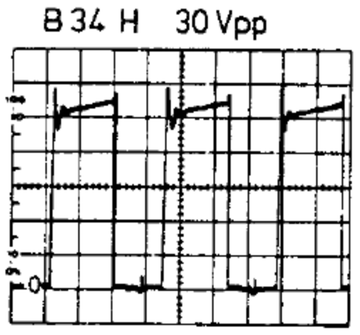
B 32 V 3,8 Vpp



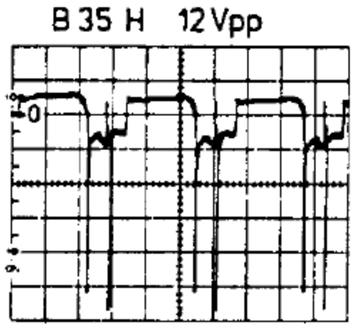
B 33 H 3 Vpp



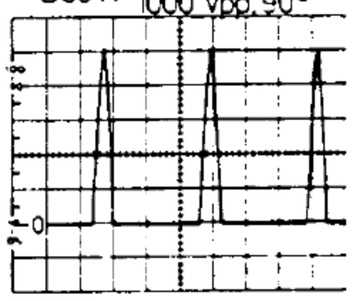
B 34 H 30 Vpp



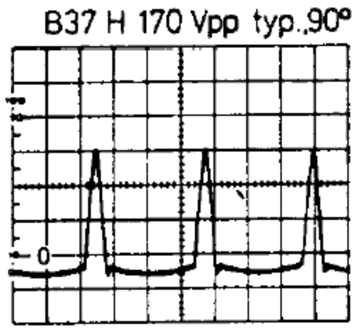
B 35 H 12 Vpp



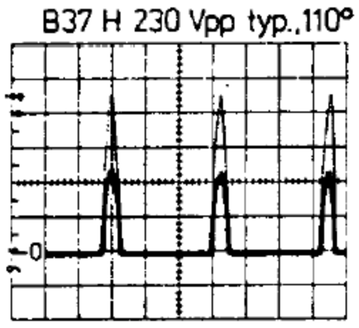
B 36 H 1200 Vpp, 110°
1000 Vpp, 90°



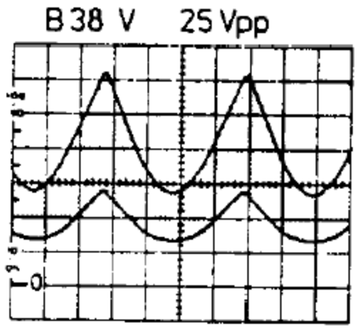
B 37 H 170 Vpp typ., 90°



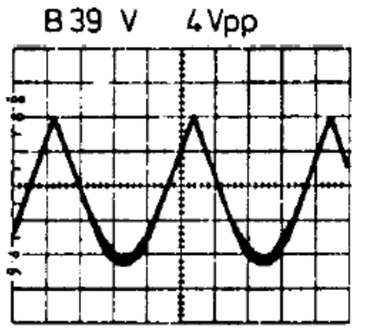
B 37 H 230 Vpp typ., 110°



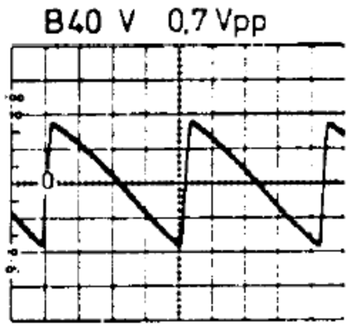
B 38 V 25 Vpp



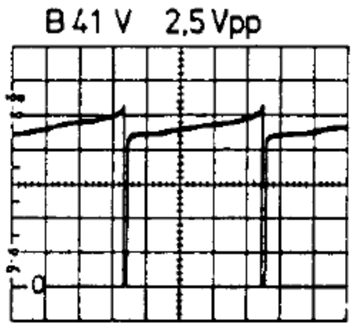
B 39 V 4 Vpp



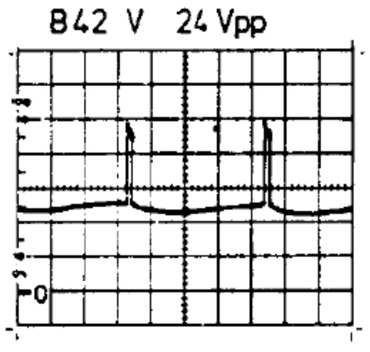
B 40 V 0,7 Vpp



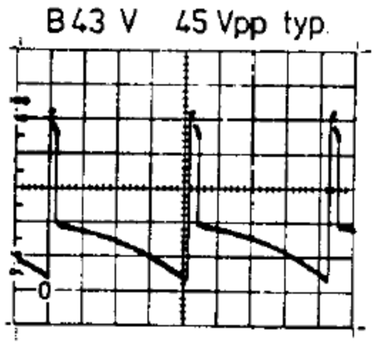
B 41 V 2,5 Vpp



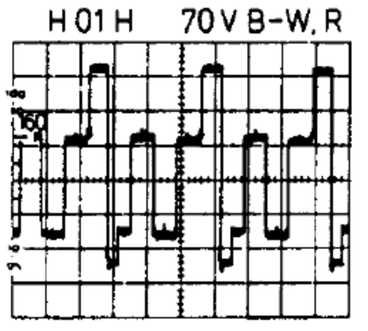
B 42 V 24 Vpp



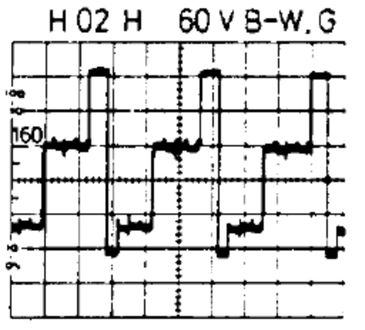
B 43 V 45 Vpp typ.



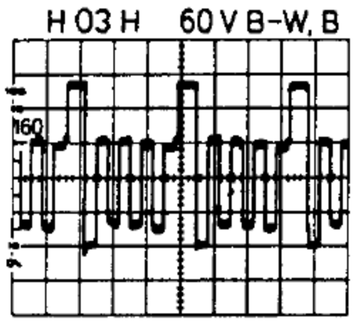
H 01 H 70 V B-W, R



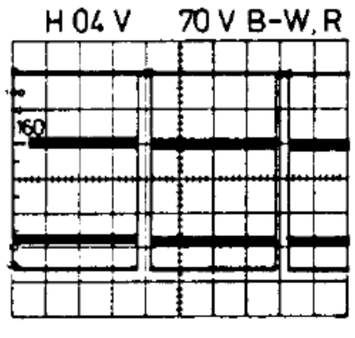
H 02 H 60 V B-W, G



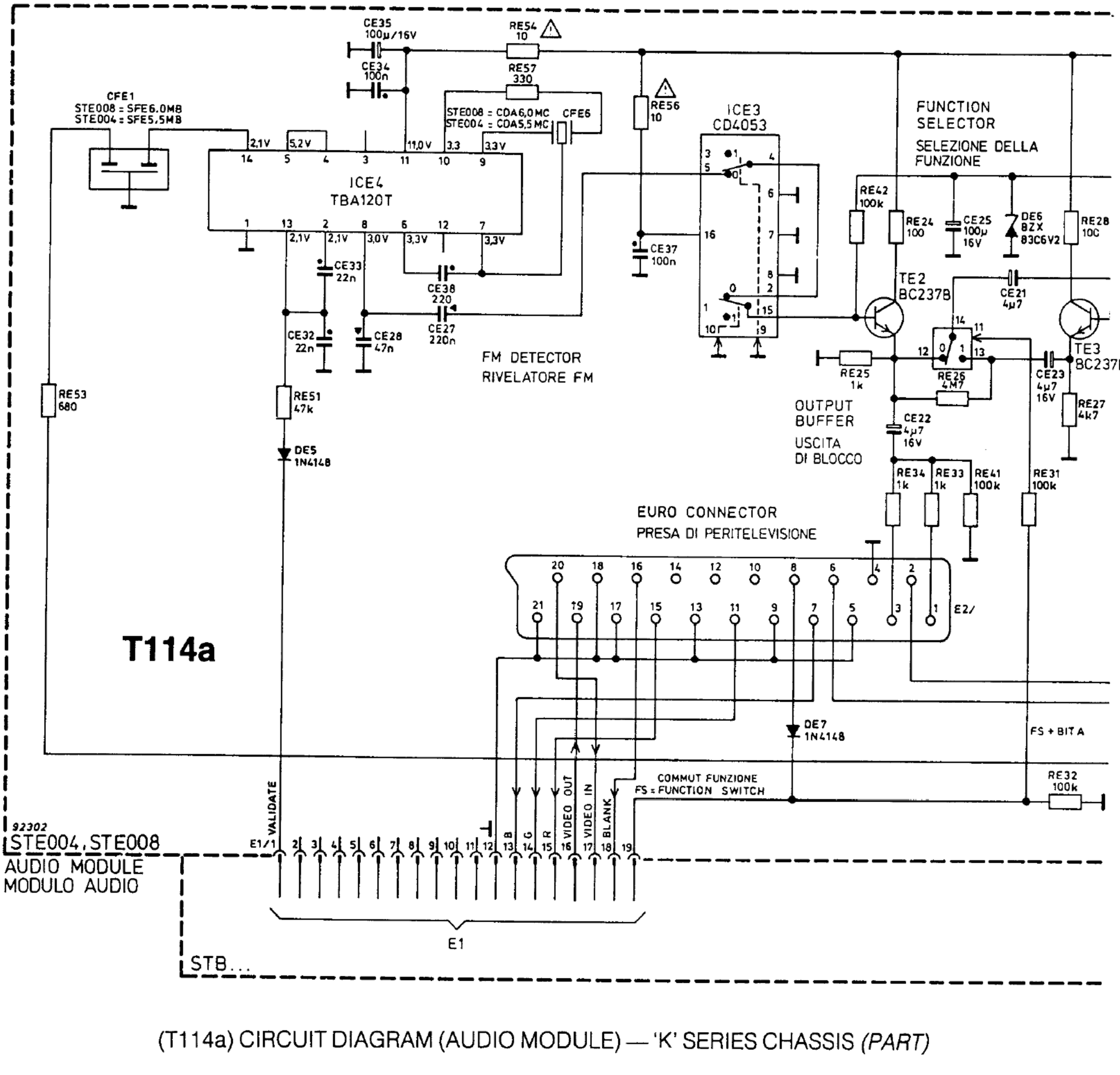
H 03 H 60 V B-W, B



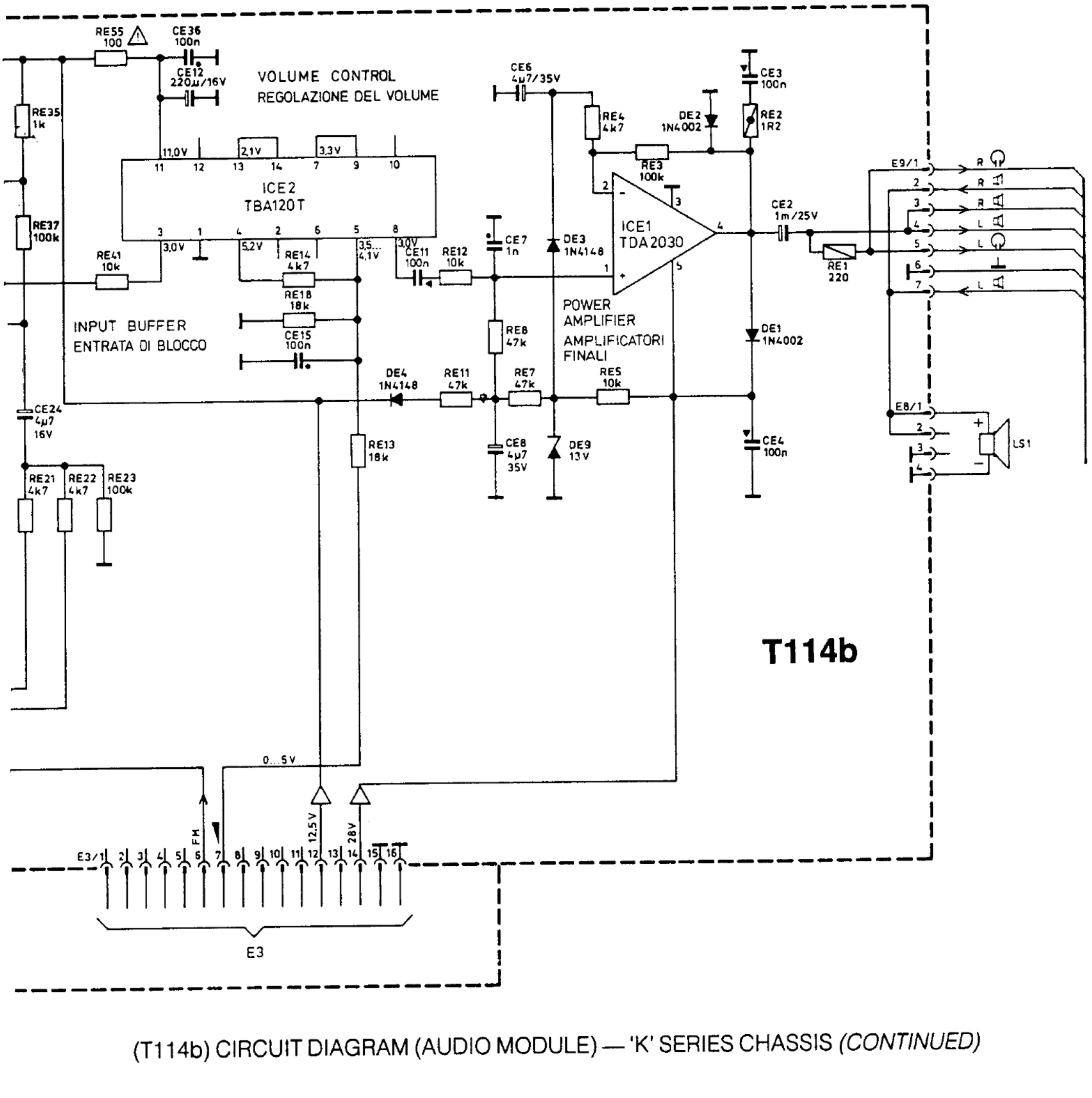
H 04 V 70 V B-W, R



(T67) CIRCUIT WAVEFORMS — 'K' SERIES CHASSIS

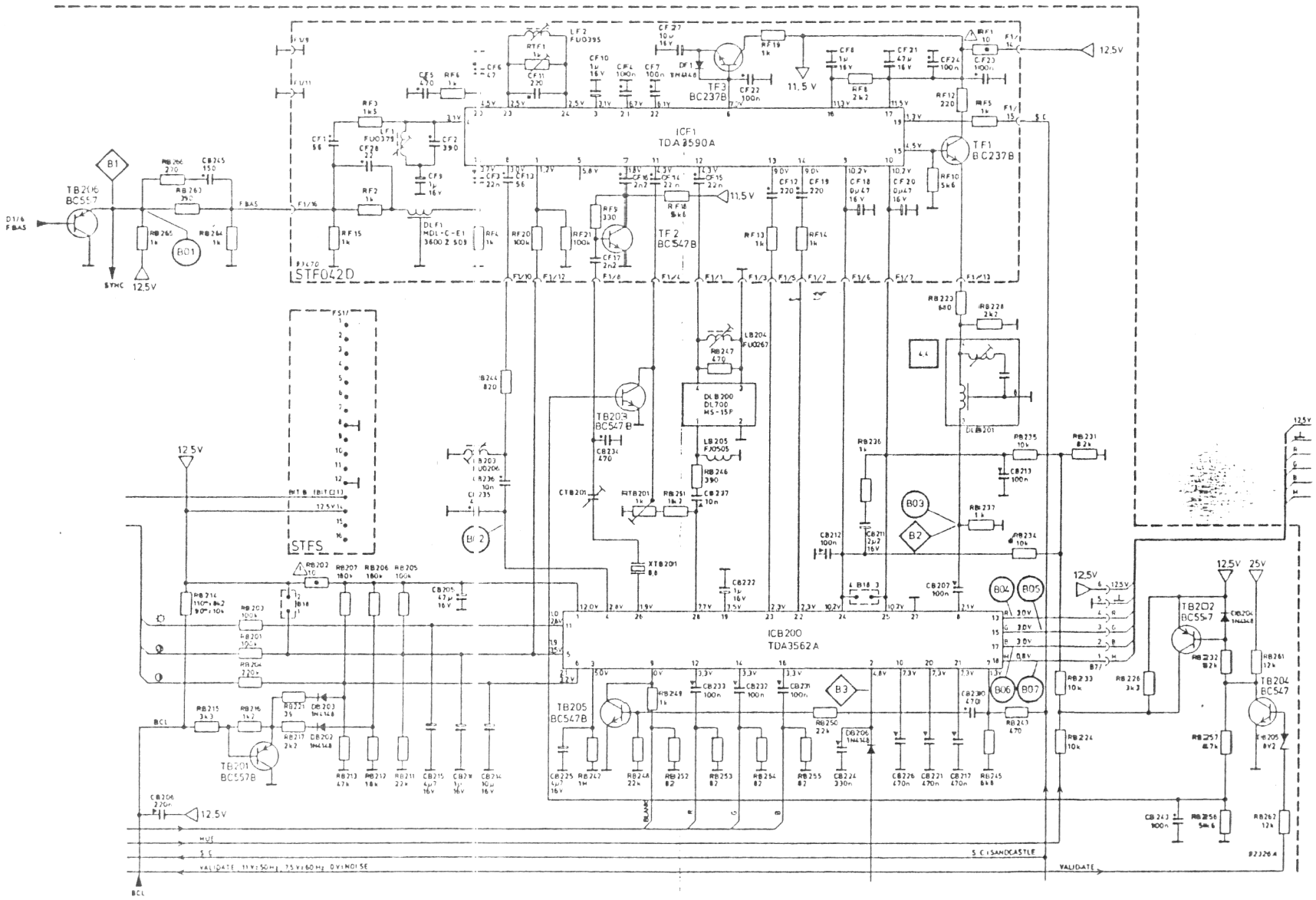


(T114a) CIRCUIT DIAGRAM (AUDIO MODULE) — 'K' SERIES CHASSIS *(PART)*



T114b

(T114b) CIRCUIT DIAGRAM (AUDIO MODULE) — 'K' SERIES CHASSIS *(CONTINUED)*



The manufacturer reserves the right to change the design and specification without prior notice or warning.

K PAL/SECAM

ZB8200 01.86 92326A

VIDEO AND SOUND IF MODULE MODULO MF

STD131B

22294

STC... =FREQ.SYNTH. WITH REMOTE CONTROL / MOD. SINTESI DI FREQUENZA CON TELECOMANDO

STE... =AUDIO MODULE/MODULO AUDIO

STEJ... =AM-MODULE OR FM-RADIO INTERFACE/ MODULO AM OPPURE INTERFACCIA RADIO-FM

STEX... =FM-MULTINORM MODULE/MODULO FM-MULTINORM

ST... =SECAM TRANSCODER MODULE/DECODIFICA SECAM

STFG... =NTSC-MODULE/MODULO NTSC

STG... =TELETEXT MODULE/MODULO TELEVIDEO

STGS... =VIDEOTEX INTERFACE/MODULO VIDEOTEL

STNS... =SATELLITE INTERFACE/INTERFACCIA SATELLITE

ICD2 TDA2545A

ICD1 TDA2549

TUB100 069 DKC (SK0061) STB151, STB153, STB139

TUB100 069 DKC (SK0063) STB161, STB166

SAFD1 OFW731

TD1 BF199

CFD1 TPS5.5MB

PRESCALER OUTPUT

NTSC FILTERS AND L-NORM SWITCHING ACCESSORIES
PREDISPOSIZIONE PER FILTRI NTSC E COMMUTAZIONE L-NORM

MAINS ISOLATED
ISOLATO DALLA RETE
MAINS NON ISOLATED
NON ISOLATO DALLA RETE

DEGAUSSING COILS

STB139 (110°/T)
STB151 K (90°) STB161 (90°)
STB153 G (110°) STB166 A (110°)
MOTHER BOARD B TELAIO BASE B

NB. Safety components marked with ⚠ must be replaced with original or approved components only. All printed boards and the back cover are also safety components.

NOTA: I componenti contrassegnati con ⚠ devono essere sostituiti con componenti originali.

The manufacturer reserves the right to change the design and specification without prior notice or warning.

La fabbrica si riserva il diritto di apportare modifche all schema e alle specificazioni senza dare alcun preavviso.

	Ceram.	Polypropylen	Polyester Polycarb.
	63 V	63 V	100 V
¼ W	160 V	160 V	160 V
½ W	250 V	250 V	250 V
1 W	500 V	500 V	400 V
2 W	1,5 kV	1,5 kV	1,5 kV

M = Metal film resistor
M = Resistenza metallico
= Take off jumper
= Ponticelli da togliere
= Insert jumper
= Ponticelli da aggiungere
* = From original source only
* = Originali forniti da fabbricante

SECAM TRANSCODER MODULE STF
DECODIFICA SECAM STF...

STFS

STGS

ICB200
TDA3562A

ICB500
TDA2579

ICB501
TDA3654

STH153E, STH152C
RGB-OUTPUT AND TUBE BIAS PANEL ZOCCOLO CINESCOPIO

21" = A51 JSY01X03
A51 EAL00X01
A51 JFC01X03 } STH153
24" = A59 JMZ30X02
28" = A66 JMZ30X03
24" = A59EAK00X01 } STH152
28" = A66 EAK00X01

ASSEMBLIES OF VERT. AND HOR. YOKES
COLLEGAMENTI DEL GIOGO DI DEFLESSIONE

OTHERS

21"= A51 JFC01X03
21"= A51 JSY01X03
90°

24"= A59 JMZ30X02
28"= A66 JMZ30X03
110°/T

90°

24"= A59EAK00X01
28"= A66EAK00X01
110°

94910

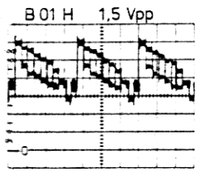
FOR TUBES OF 110° PER TUBI A 110°

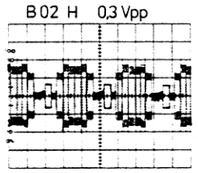
FOR TUBES OF 90° PER TUBI A 90°

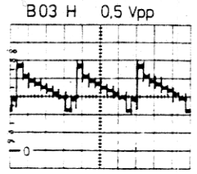
21K7.
24K7.
28K7.

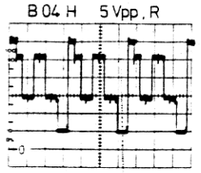
(B)

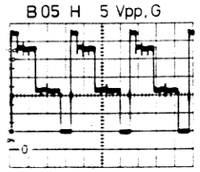
ZB8281 04.87 90199F, 90232B

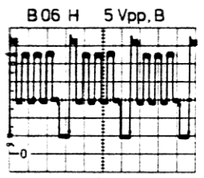


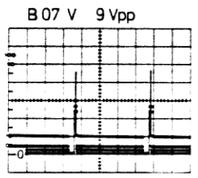


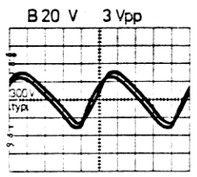


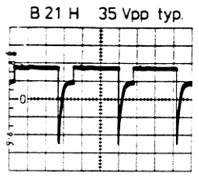


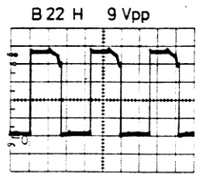


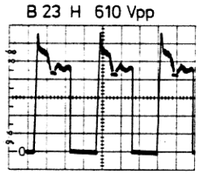


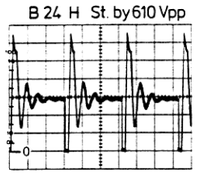


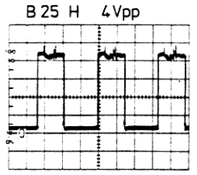


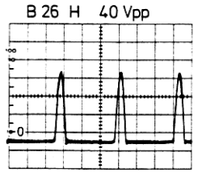


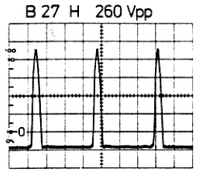


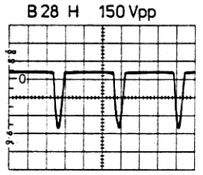


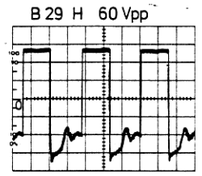


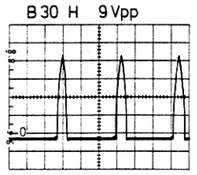


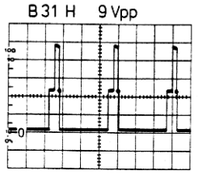


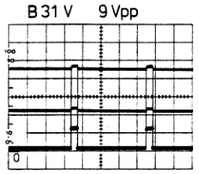


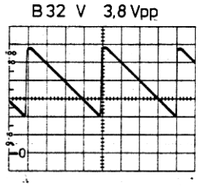


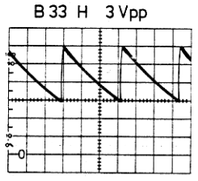


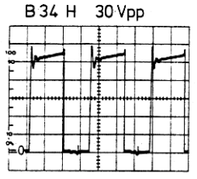


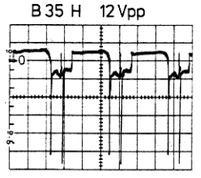


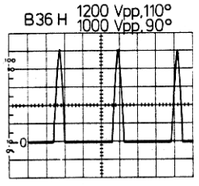


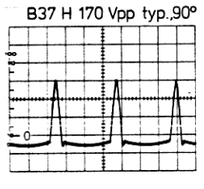


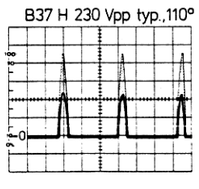


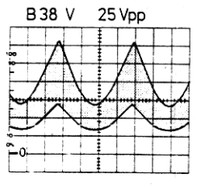


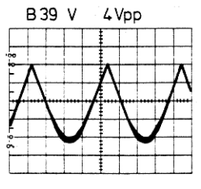


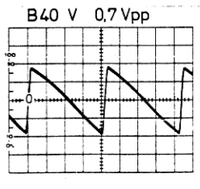


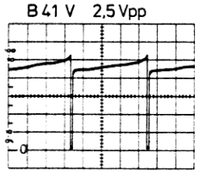


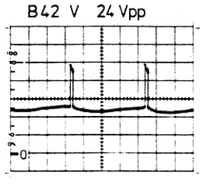


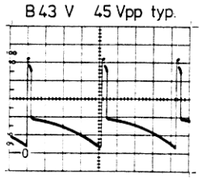


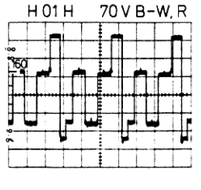


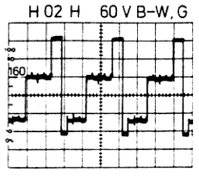


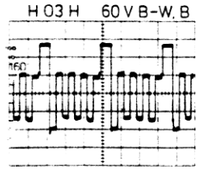


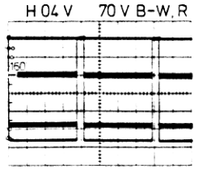












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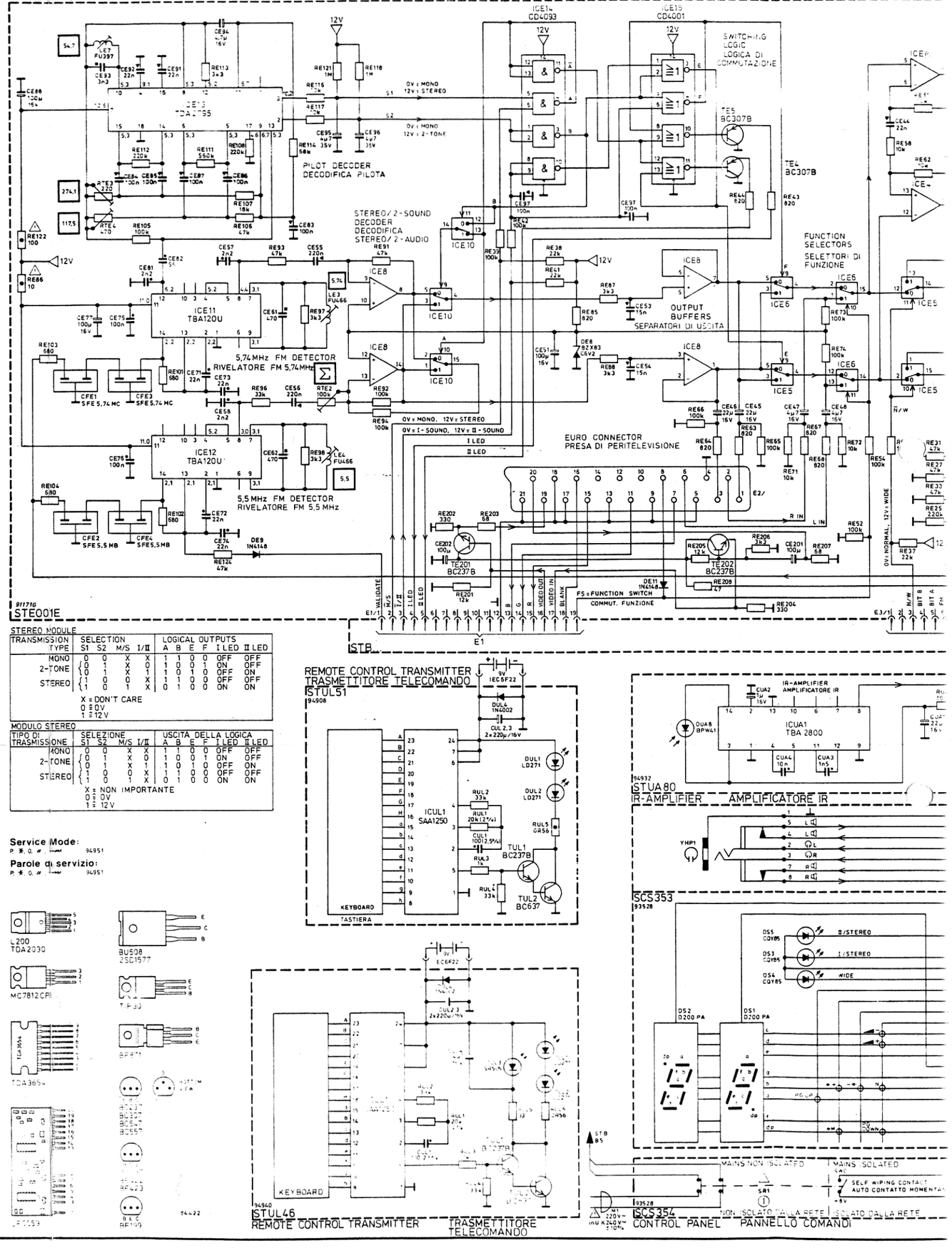
21K7.
24K7.
28K7.

ZB8281 04.87 90199F, 90232B



SWITCHING LOGIC
LOGICA DI COMMUTAZIONE

SUPERSOUND CIRCUIT
CIRCUITO "SUPERSOUND"

ICE4 = TL084
ICE5 = CD4053
ICE6 = CD4053
ICE8 = TL084
ICE10 = CD4053

FUNCTION SELECTORS
SELETTORI DI FUNZIONE

OUTPUT BUFFERS
SEPARATORI DI USCITA

TONE CONTROL
CONTROLLO TONI

POWER AMPLIFIERS
AMPLIFICATORI FINALI

NV-MEMORY
MEMORIA NV

TUNING & CONTROL UNIT
SINTONIZZAZIONE & REGOLAZIONE

BUS & D/A CONVERTER
CONVERSIONE BUS & D/A

TUNER INTERFACE
INTERFACCIA SINTONIZZATORE

IR-AMPLIFIER
AMPLIFICATORE IR

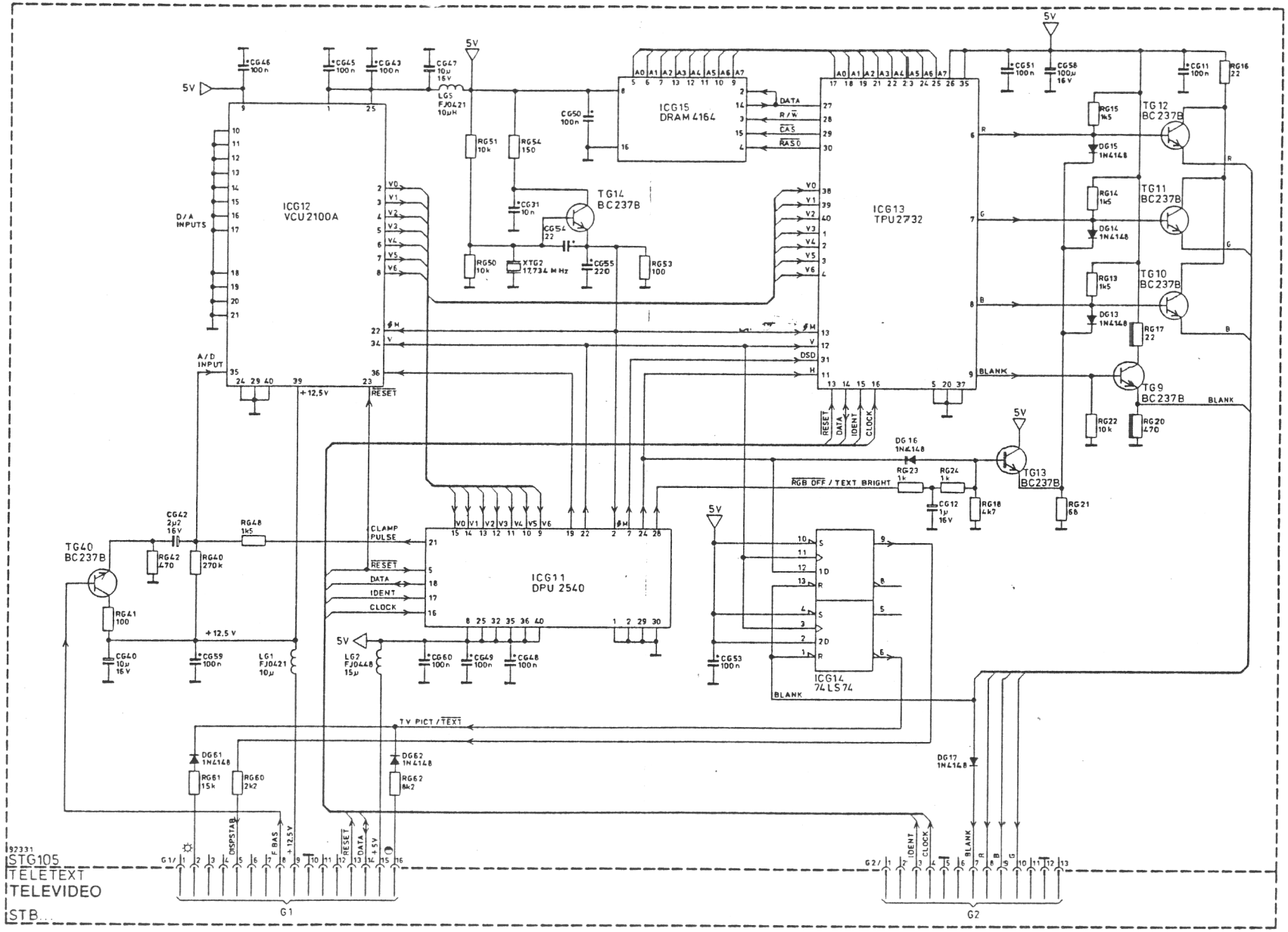
TUNER PRESCALER
ZINTONIZZATORE

CONTROL PANEL
PANNELLO COMANDI

NON ISOLATO DALLA RETE
ISOLATO DALLA RETE

SELF WIPING CONTACT
AUTO CONTATTO MOMENTANEO

FREQ. SYNTH. WITH REMOTE CONTROL
MOD. SINTESI DI FREQUENCA CON TELECOMANDO



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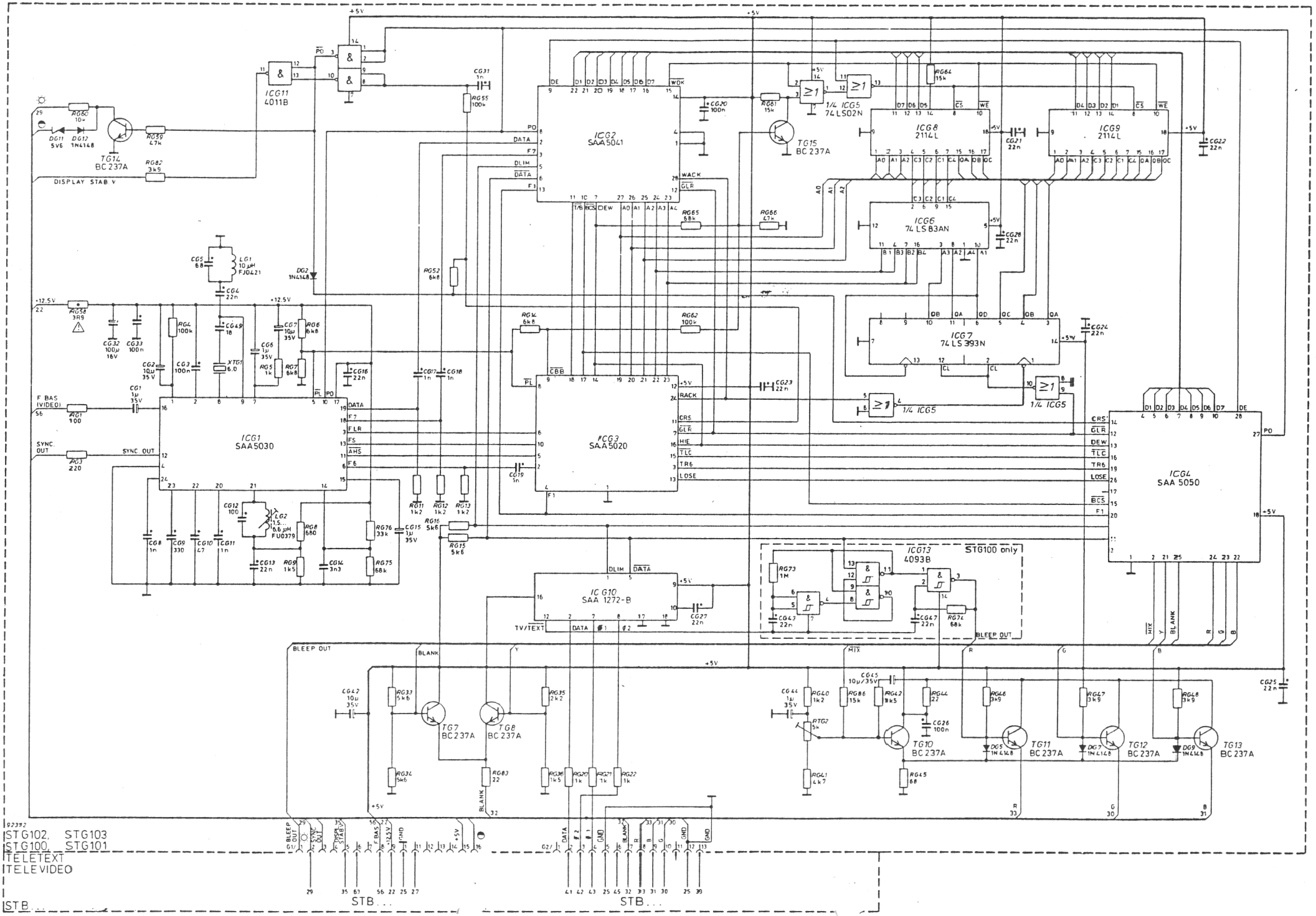
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ICG2 SAA5041
ICG3 SAA5020
ICG4 SAA 5050
ICG5 74LS02N
ICG6 74LS83AN
ICG7 74LS393N
ICG8 2114L
ICG9 2114L
ICG10 SAA 1272-B
ICG11 4011B
ICG13 4093B
STG100 only
TG7 BC237A
TG8 BC237A
TG10 BC237A
TG11 BC237A
TG12 BC237A
TG13 BC237A
TG14 BC237A
TG15 BC237A
DISPLAY STAB V
F BAS (VIDEO)
SYNC. OUT
BLEEP OUT
STB...
STB...
92392
STG102, STG103
STG100, STG101
TELETEXT
TELEVIDEO